

L85 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1966:483119 HCAPLUS

DN 65:83119

OREF 65:15611e-h

TI Water-soluble linear polymers

PA Peninsular Chemresearch, Inc.

SO 14 pp.

DT Patent

LA Unavailable

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1037028		19660720	GB 1963-49003	19631211 <--
PRAI	US 3,288,770		19621214	<--	

GI For diagram(s), see printed CA Issue.

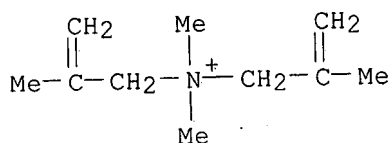
AB Linear high-mol.-weight polymers were obtained by treatment of monomers containing 2 olefinic groups separated by 3 C atoms and a quaternary ammonium chloride group with tert-BuOOH in H₂O. Thus, monomers having the general formula I were polymerized. (R, R₁, R₂, R₃ are given): H, H, Me, Me; H, H, Et, Et; H, H, CH₂CH₂OH, CH₂CH₂OH; H, H, Bu, Bu; H, H, n-dodecyl, n-dodecyl; Me, Me, Me, Me; H, Me, Me, Me; H, Cl, Me, Me; Cl, Cl, Me, Me; Cl, Me, Me, Me; H, H, PhOCH₂, PhOCH₂; Br, Br, EtOCH₂, EtOCH₂; Cl, Cl, EtO₂CCH₂CH₂, EtO₂CCH₂CH₂; H, H, FCH₂(CH₂)₂, FCH₂(CH₂)₂; Me, Me, NCCH₂CH₂, NCCH₂CH₂; H, H, PhOCH₂CH₂, PhOCH₂CH₂; H, H, naphthyloxyethyl, naphthyloxyethyl; H, H, PrSCH₂, PrSCH₂; Me, Me, PhSCH₂CH₂; H, H, AcCH₂, AcCH₂; Me, Me, cyclopentylmethyl, cyclopentylmethyl; H, H, cyclohexylmethyl, cyclohexylmethyl; H, H, MeCH(NO₂)CH₂, MeCH(NO₂)CH₂; Me, Me, CH₂CH₂CONH₂, CH₂CH₂CONH₂; H, H, Me, Ph. Other monomers used were: N,N-diallyl-, N-allyl-N-methyl-2-vinyl-, N,N-dimethyl-2,6-divinyl-, and N,N-bis(p-cyanophenyl)-2,6-divinylpiperidinium chloride; N,N-diallyl-, N-allyl-N-methyl-2-vinyl-, N,N-dimethyl-2,6-divinyl-, N,N-bis(p-chlorophenyl)-2,6-divinyl-, and N-methyl-N-(p-acetophenyl-2-vinylmorpholinium chloride; and N,N-diallyl-, N-allyl-N-methyl-2-vinyl-, N,N-dimethyl-2,5-divinyl-, N,N-bis(m-ethylthiophenyl)-2,5-divinyl-, and N-(phenylthioethyl) - N-(hydroxyethyl)-2,6-divinylpyrrolidinium chloride. Other heterocyclic monomers were 1,1-diallylpyrazolinium chloride, 1,1-diallylimidazolinium chloride, and N-allyl-2-vinylpyridinium chloride. N, N-Diallylpyrrole was polymerized by BaO₂. By using a quaternary anion-exchange column, the polymeric chlorides obtained were converted to polymers having other anions. The polymer products are useful as spinning aids, antistatic, bacteriostatic, and fungistatic agents, wet-strength improvers for papers, accelerators for curing rubber, curing agents for epoxy resins, stabilizers and regulators for particle size in suspension polymerization, and as surfactants, especially flocculating agents.

IC C08F

CC 48 (Plastics Technology)

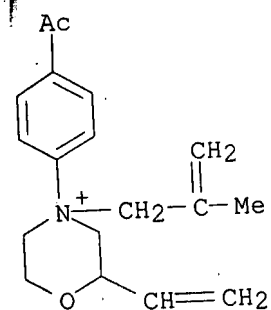
IT 6982-68-9, Ammonium, dimethylbis(2-methylallyl), chloride
 13107-00-1, Ammonium, diallyldiethyl, chloride 13239-81-1, Morpholinium,
 4,4-di-2-propenyl-, chloride 13731-90-3, Morpholinium,
 4-allyl-4-methyl-2-vinyl-, chloride 13731-91-4, Morpholinium,
 4,4-dimethyl-2,6-divinyl-, chloride 13731-92-5, Morpholinium,
 4-(p-acetylphenyl)-4-(2-methylallyl)-2-vinyl-, chloride 13731-93-6,
 Pyrrolidinium, 1,1-diallyl-, chloride 13731-94-7, Pyrrolidinium,

- 1-allyl-1-methyl-2-vinyl-, chloride 13731-95-8, Pyrrolidinium,
 1,1-dimethyl-2,5-divinyl-, chloride 13731-96-9, Pyrrolidinium,
 1-(2-hydroxyethyl)-1-[2-(phenylthio)ethyl]-2,5-divinyl-, chloride
 13731-97-0, Pyrrolidinium, 1,1-diallyl-, chloride 13866-89-2, Ammonium,
 diallylmethylphenyl, chloride 13866-90-5, Pyrrolidinium,
 1,1-bis[m-(ethylthio)phenyl]-2,5-divinyl-, chloride 13897-53-5,
 Ammonium, bis(cyclopentylmethyl)bis(2-methylallyl), chloride 13962-94-2,
 Morpholinium, 4,4-bis(p-chlorophenyl)-2,6-divinyl-, chloride 14219-12-6,
 Ammonium, diallylbis(2-hydroxyethyl), chloride 14219-13-7, Ammonium,
 diallyldibutyl, chloride 14219-14-8, Ammonium, diallyldidodecyl,
 chloride 14219-15-9, Ammonium, allyldimethyl(2-methylallyl),
 chloride 14219-16-0, Ammonium, allyl(2-chloroallyl)dimethyl, chloride
 14219-17-1, Ammonium, bis(2-chloroallyl)dimethyl, chloride
 14219-18-2, Ammonium, (2-chloroallyl)dimethyl(2-methylallyl),
 chloride 14219-19-3, Ammonium, bis(2-bromoallyl)bis(2-ethoxyethyl),
 chloride 14219-20-6, Ammonium, bis(2-carboxyethyl)bis(2-chloroallyl),
 chloride, di-Et ester 14219-21-7, Ammonium, diallylbis(4-fluorobutyl),
 chloride 14219-23-9, Ammonium, diallylbis(2-phenoxyethyl), chloride
 14219-24-0, Ammonium, diallylbis[(propylthio)methyl], chloride
 14219-25-1, Ammonium, diacetonyldiallyl, chloride 14219-27-3, Ammonium,
 diallylbis(cyclohexylmethyl), chloride 14219-28-4, Ammonium,
 diallylbis(2-nitropropyl), chloride 14219-29-5, Ammonium,
 bis(2-carbamoyl)ethyl)bis(2-methylallyl), chloride 15553-03-4,
 Ammonium, bis(2-methylallyl)bis[2-(phenylthio)ethyl], chloride
 30112-64-2, Ammonium, diallylbis(methoxyphenyl), chloride 30304-59-7,
 Ammonium, diallylbis[2-(naphthyl)oxy)ethyl], chloride 48042-45-1,
 Ammonium, diallyldimethyl
 (polymerization of, with peroxide catalysts, and polymers therefrom)
 IT 14219-22-8, Ammonium, bis(2-cyanoethyl)bis(2-methylallyl),
 chloride
 (polymerization of, with. peroxide catalysts, and polymers therefrom)
 IT 6982-68-9, Ammonium, dimethylbis(2-methylallyl), chloride
 13731-92-5, Morpholinium, 4-(p-acetylphenyl)-4-(2-methylallyl)-2-
 vinyl-, chloride 13897-53-5, Ammonium,
 bis(cyclopentylmethyl)bis(2-methylallyl), chloride 14219-15-9,
 Ammonium, allyldimethyl(2-methylallyl), chloride 14219-18-2,
 Ammonium, (2-chloroallyl)dimethyl(2-methylallyl), chloride
 14219-29-5, Ammonium, bis(2-carbamoyl)ethyl)bis(2-methylallyl),
 chloride 15553-03-4, Ammonium, bis(2-methylallyl)bis[2-
 (phenylthio)ethyl], chloride
 (polymerization of, with peroxide catalysts, and polymers therefrom)
 RN 6982-68-9 HCAPLUS
 CN 2-Propen-1-aminium, N,N,2-trimethyl-N-(2-methyl-2-propenyl)-, chloride
 (9CI) (CA INDEX NAME)

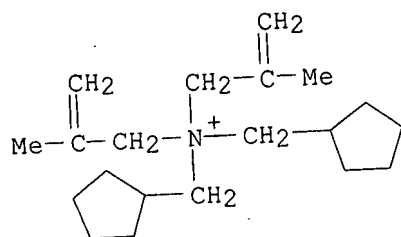
● Cl⁻

- RN 13731-92-5 HCAPLUS
 CN Morpholinium, 4-(p-acetylphenyl)-4-(2-methylallyl)-2-vinyl-, chloride
 (8CI) (CA INDEX NAME)

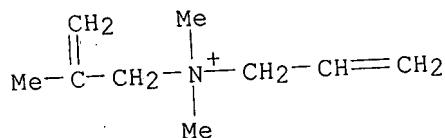
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● Cl⁻

RN 13897-53-5 HCAPLUS
 CN Ammonium, bis(cyclopentylmethyl)bis(2-methylallyl)-, chloride (8CI) (CA INDEX NAME)

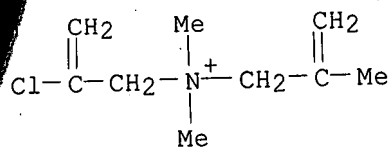
● Cl⁻

RN 14219-15-9 HCAPLUS
 CN Ammonium, allyldimethyl(2-methylallyl)-, chloride (8CI) (CA INDEX NAME)

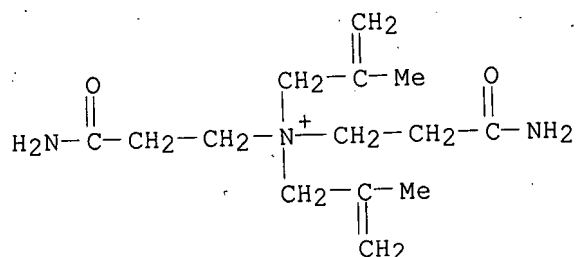
● Cl⁻

RN 14219-18-2 HCAPLUS
 CN Ammonium, (2-chloroallyl)dimethyl(2-methylallyl)-, chloride (8CI) (CA INDEX NAME)

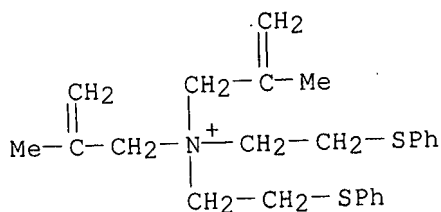
jan delaval - 12 february 2007

● Cl⁻

RN 14219-29-5 HCAPLUS
 CN Ammonium, bis(2-carbamoylethyl)bis(2-methylallyl)-, chloride (8CI) (CA INDEX NAME)

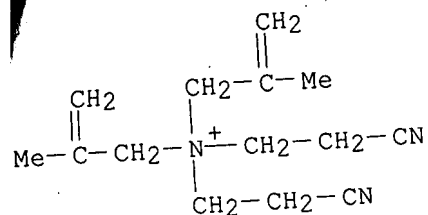
● Cl⁻

RN 15553-03-4 HCAPLUS
 CN Ammonium, bis(2-methylallyl)bis[2-(phenylthio)ethyl]-, chloride (8CI) (CA INDEX NAME)

● Cl⁻

IT 14219-22-8, Ammonium, bis(2-cyanoethyl)bis(2-methylallyl), chloride
 (polymerization of, with. peroxide catalysts, and polymers therefrom)
 RN 14219-22-8 HCAPLUS
 CN Ammonium, bis(2-cyanoethyl)bis(2-methylallyl)-, chloride (8CI) (CA INDEX NAME)

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● Cl⁻

L85 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1962:73382 HCAPLUS

DN 56:73382

OREF 56:14209c-i, 14210a-h

TI Enamines. III. Alkylation of enamines derived from aldehydes

AU Opitz, Guenter; Mildenberger, Hilmar

CS Univ. Tuebingen, Germany

SO Ann. (1961), 649, 26-35

DT Journal

LA Unavailable

OS CASREACT 56:73382

AB cf. CA 54, 14254h. Tertiary enamines derived from disubstituted aldehydes gave with MeI or EtI by means of N-alkylation α,β -unsatd.

quaternary ammonium salts. The action of alkyl halides on tertiary enamines from AcH and monosubstituted aldehydes produced self-condensation of the enamine with alkylation of the cleaved secondary amines.

C-Alkylations succeeded only with especially reactive halides. (All expts. were carried out under N in anhydrous solvents). To 109.5 g. Et₂NH, 105 g. K₂CO₃, and 150 cc. Et₂O was added dropwise 33 g. paraldehyde at 0-5° with stirring and cooling, stirred 14 hrs. at room temperature,centrifuged, the solution concentrated, and the residue [40 g.; (Et₂N)₂CHMe] subjected to destructive distillation to give 8.3 g. Et₂NCH:CH₂ (I), b₁₀₀ 47-52°. ZCH:CHMe (II) (Z = 1-piperidino throughout this abstract), b₁₅ 61-3°; ZCH:CHEt (III), b₁₄ 73.5°. 1-Morpholino-1-butene (IV), b₁₂ 73-4°, was prepared in 78% yield; 1-morpholino-1-heptene (V) b₁₄ 120°. I (8.3 g.) in 20 cc. dioxane treated dropwise with7.9 g. (BrCH₂)₂ (VI) at 0°, heated several hrs. at 30-50°, and the precipitate filtered off gave a reaction product of VI and Et₂NH; the filtrate hydrolyzed gave AcH (as 2,4-dinitrophenylhydrazones) and a red oil, which did not react with 2,4-(O₂N)₂C₆H₃NHNH₂ (VII). II (16.77 g.) and 19.05 g. MeI in 50 cc. petr. ether stirred 36 hrs. at -70° gave N,N-dimethylpiperidinium iodide (VIII); after acid hydrolysis the filtrate gave a viscous oil which did not yield a precipitate with VII. II and MeI without a solvent reacted at 20° and gave the same products. The addition of an equivalent amount N-ethylcyclohexylamine (IX) did not change

the result. Similar results were obtained on treating II with BuBr as well as V with BuBr, MeI, and EtI with or without IX. Freshly dist. III (14.0 g.) in 100 cc. Et₂O treated with 17.0 g. MeI, kept 5 days, and the product extracted with Me₂CO gave VIII, m. 346-9°; the filtrate concentrated gave a viscous oil, from which only impure VIII was separated and no other definite product. The above experiment was repeated many times with interruption at certain intervals to always give VIII and more or less oil. Less carefully fractionated III or aged III treated as above in Et₂O or petr.

jan delaval - 12 february 2007